REMARKS

The Office Action of May 21, 2004 has been carefully considered.

Claims 1-7 and 9-12 have been rejected under 35 USC 103(a) over Chakrabarti et al.

Chakrabarti et al discloses series 7xxx aluminum alloys where $Mg \leq (Cu+0.3)$, and which are aged to result in compressive yield strengths which are higher than those previously known in the art.

Table 3 sets forth a comparison of properties in the L-direction as a function of aging time, which is 6, 8 or 11 hours at 320°F (160°C). The compressive yield strength clearly decreases as a function of aging time.

The composition of Chakarabarti overlaps the claimed composition only when Mg is between 1.8 and 1.9%, and none of the examples of Chakrabarti et al fall within this range; see [0073], [0075], [0076], Table 4 and Table 11. In the examples of Chakrabarti et al, Mg is not higher than about 1.5%.

Applicant has now added new claims 25 and 28 to the application reciting a lower limit for the magnesium content of 2.15%, as is disclosed in the specification in paragraph [0037]. The range for magnesium content for claims 25 and 28 is now entirely outside of the range disclosed by Chakrabarti et al of 1.2 to 1.9%.

The claimed invention is based upon maximizing compression yield strength (CYS) as opposed to tensile yield strength (TYS). The conditions for maximizing CYS are different from those for maximizing TYS, as can be seen by comparing the lower two curves in Figure 4 of the present application. From these curves it can be seen that peak tensile yield strength is obtained at the shortest aging time, about 50 hours, whereas the peak compression yield strength is

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obtained after a longer aging time, about 100-200 hours.

With reference to Chakrabarti et al Table 3, the minimum aging time of 6 hours at 160°C corresponds to 258 hours at 120°C (exceeding the times of claims 1 and 7), not even taking into account Chakrabarti's initial aging step of 6 hours at 121°C, as disclosed in [0087] and Table 5. Thus, Chakrabarti et al has missed the CYS peak, so as to not compromise fracture toughness.

Moreover, Chakrbarti et al prefers a three stage aging, whereas the invention of claim 7 is directed to a single step aging at a temperature of no more than 145°C. Even the single step aging disclosed in Table 3 takes place at a temperature in excess of 145°C. With regard to the 258 hour equivalent aging disclosed by Chakrabarti et al, the Office Action points out that Chakrabarti et al discloses an aging temperature as low as 305°F *as the second step of an aging process* ([0018]). Chakrabarti et al is not however seen to disclose the use of a temperature as low as 305°F is a single step aging process. The overlap alleged based on the aging temperature of 305°F is thought to be merely speculative.

Withdrawal of this rejection is requested.

In view of the foregoing amendments and remarks, Applicant submits that the present application is now in condition for allowance. An early allowance of the application with amended claims is earnestly solicited.

Respectfully submitted,

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